REMARKS

By this Amendment, Applicants have amended claims 1, 3, 4, 17, 19, 20, 32, 33, 39-55, 59-70, 72, and 73. Applicants have also cancelled claims 2, 18, 34, 38 and 71. The pending claims are 1, 3, 4, 17, 19, 20, 32, 33, 35-37, 39-70, and 72-74.

Claim Rejections Under Section 112

Claims 3, 4, 19, 20, 32, 33, 40-55 and 59-73 stand rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite for reasons set forth in numbered paragraph 2 of the Office Action. Following the guidance of the Examiner, Applicants have amended claims 3, 4, 19, 20, 32, 33, 40-55, and 59-73 to overcome the basis for the Section 112 rejection stated in numbered paragraph 2 of the Office Action.

Claims 1-4, 17-20, and 34-73 stand rejected under 35 U.S.C. Section 112, first paragraph, for reasons set forth in numbered paragraph 4 of the Office Action. Applicants have amended the claims to overcome the basis for this Section1 112 rejection as stated in numbered paragraph 4.

Applicants request the Examiner reconsider his remarks set forth at numbered paragraph 5 of the Office Action. Numbered paragraph 5 of the Office Action is repeated below:

> The examiner notes that the instant claims are extremely broad and further notes applicants explanation in the paragraph bridging pages 50 and 51 of the instant disclosure that "the deviation (duv) of the chromatricity of light from a Plankian locus in CIE 1960 USC chromaticity diagram is within + -0.01 in order to ensure that the color of light would not be uncomfortable". Thus light which is not of a color

which causes discomfort will be considered to be within + -0.01 of such Plankian locus.

Applicants respectfully disagree with the Examiner's characterization of the present invention (at numbered paragraph 5) that light which is not of a color which causes discomfort will be considered to be within $\pm$ 0.01 of the Plankian locus. The subject specification in the paragraph bridging pages 50 and 52 discloses only that light within $\pm$ 0.01 of the Plankian locus is used to ensure that the illuminated light is not of a color that causes discomfort. This does not limit light which does not cause discomfort to light which is within $\pm$ 0.01 of the Plankian locus. Applicants thus respectfully disagree with the Examiner's characterization of Applicants' claimed invention. Applicants also contend that the Examiner's characterization of the claims as being "extremely broad" is irrelevant. The breath of a claim is irrelevant in connection with determining whether the claim distinguishes from the prior art.

Based on the foregoing remarks and amendments, Applicants respectfully submit that all claims are in full compliance with Section 112.

Claim Rejections Under Section 102

Claims 1-4, 17-20, 32, 34, 37, 39, 56, 71 and 72 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by "the sun"; claims 1, 17, 33, 36-43, 58 and 61 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by a "helium neon laser"; claims 1, 17, 35-39, 52-58, and 68-70 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by Diamantopoulos; claims 1, 17 and 36-47 stand rejected under 35 U.S.C. Section 102(e) as being anticipated by Hashimoto; claims 1, 17, 36-39, and 48-51 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by Shimizu; and claims 17 and 72-74 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by "the sun in combination with a mirror". Applicants respectfully traverse these Section 102 rejections.

Claim 1 is an independent claim to which all of the other claims depend either directly or indirectly. Claim 1 is directed to a radiant energy radiation apparatus and includes the following elements:

- means for providing radiation in a visible wavelength range, and
- means for providing radiation in a predetermined **wavelength range of 600 nm to 1100 nm** for the purpose of permeating into an organism to maintain/promote biofunctions of the organism,
- **wherein on an irradiated plane irradiated with the radiation in the predetermined wavelength range of 600 nm to 1100 nm, an irradiance at a wavelength in the predetermined wavelength range of 600 nm to 1100 nm is 0.1 W/m^2 or more, and**
- **in the irradiated plane, radiant energy of radiation at a wavelength in the range of 1100 nm to 2.5 μm is smaller than radiant energy of radiation at a wavelength in a range of 600 nm to 1100 nm.**

It is Applicants contention that the radiant energy radiation apparatus of claim 1 is patentably distinguished from the references of record at least on the basis of the features of (i) means for providing radiation in a predetermined wavelength range of 600 nm to 1100 nm for the purpose of permeating into an organism to maintain/promote biofunctions of the organism, (ii) an irradiance at a wavelength in the predetermined wavelength range of 600 nm to 1100 nm is 0.1 W/m^2 or more, and (iii) and radiant energy of radiation at a wavelength in a range of 1100 nm to 2.5 μm is smaller than radiant energy of radiation at a wavelength in a range of 600 nm to 1100 nm (hereinafter generally referred to as the "Radiation Features" of Applicants' claimed invention). In other words, it is Applicants position that none of the cited references either teach or suggest the Radiation Features of Applicants' claimed invention, and

thus Applicants' claimed invention is patentably distinguished from the references of record.

Specifically, Applicants submit that the "sun" and a "helium neon laser" do not include the Radiation Features as identified above.

The Diamantopolus Patent in general concerns a device for biostimulation of tissue including an array of substantially monochromatic radiation sources of a plurality of wavelengths. And the disclosure of the Diamantopolus Patent discusses the use of semiconductor laser diodes beginning at column 6, line 1. But nowhere in the Diamantopolus Patent is there any teaching or suggestion of the Radiation Features of Applicants' claimed invention.

The Hashimoto Reference concerns generally a fluorescent lamp which emits light mainly by a green phosphor, but the Hashimoto Reference does not teach or suggest the Radiation Features of Applicants' claimed invention.

The Shimizu Reference concerns in general a light source which emits light having two peaks of intensity and a correlated color temperature of a specified range. But nowhere in the Shimizu Reference is there any teaching or suggestion of the Radiation Features of Applicants' claimed invention.

Lastly, Applicants submit that the "sun in combination with a mirror" does not teach or suggest the Radiation Features defined in Applicants' claimed invention.

Because all of the above noted references lack any teaching or suggestion of the Radiation Features of Applicants' claim 1, as well as the other pending claims, these references can neither anticipate nor render obvious Applicants' claimed invention. Applicants therefore request that the Section 102 rejections be withdrawn.

Claim Rejections Under Section 103

Claims 17, and 56-64 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Hashimoto in combination with Diamantopoulos; and claims 17, 56-59 and 65-67 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Shimizu in combination with Diamantopoulos. Applicants respectfully traverse these Section 103(a) rejections.

Claims 17 and 56-67 are either directly or indirectly dependent on claim 1 and therefore include the Radiation Features. As noted above, the Hashimoto, Diamantopoulos, and Shimizu References neither disclose nor suggest the Radiation Features. Thus, dependent claims 17 and 56-67 are neither anticipated nor rendered obvious by these references. Applicants therefore request that the Section 103(a) rejections be withdrawn.

In view of the foregoing remarks and amendments, Applicants respectfully submit that claims 1, 3, 4, 17, 19, 20, 32, 33, 35-37, 39-70, and 72-74 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Request for Extension of Time:

In the subject application, it is requested that the shortened period for responding to the Official Action dated March 20, 2002 be extended one month until July 20, 2002. Enclosed is the Patent Application processing fee under 37 C.F.R. § 1.17.

Respectfully Submitted,

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The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

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7/12/02

Daniel N. Calder

VERSION WITH MARKINGS TO SHOW CHANGES MADE

CLAIMS:

1. (Amended) A radiant energy radiation apparatus, comprising:

means for providing [radiating illumination light for an illumination purpose, the illumination light containing] radiation in a visible wavelength range, and

means for providing radiation in a predetermined wavelength range of 600 nm to 1100 nm for the purpose of permeating [which permeates] into an organism to maintain/promote biofunctions of the organism,

wherein on an irradiated plane irradiated with said radiation in the predetermined wavelength range of 600 nm to 1100 nm, an irradiance at a wavelength in the predetermined wavelength range of 600 nm to 1100 nm is 0.1 W/m^2 or more, and

in said irradiated plane, radiant energy of radiation at a wavelength in a range of 1100 nm to 2.5 μm is smaller than radiant energy of radiation at a wavelength in a range of 600 nm to 1100 nm.

3. (Amended) A radiant energy radiation apparatus according to claim 1, wherein said mean for providing radiation in a [the] predetermined wavelength range [maintains/promotes the biofunctions by] includes means for increasing a strength of an immune system of the organism.

4. (Amended) A radiant energy radiation apparatus according to claim 1, wherein said means for providing radiation in the predetermined wavelength range [maintains/promotes the biofunctions by] includes means for activating an autonomic nervous system.

17. (Amended) A radiant energy radiation apparatus according to claim 1, [comprising] wherein said means for radiating radiation in [a] the predetermined wavelength range radiates radiation having [which has] a low visibility for a human and which deeply permeates into an organism to maintain/promote biofunctions.

19. (Amended) A radiant energy radiation apparatus according to claim 17, wherein said means for providing radiation in the predetermined wavelength range [maintains/promotes the biofunctions by] includes means for increasing a strength of an immune system of the organism.

20. (Amended) A radiant energy radiation apparatus according to claim 17, wherein said means for providing radiation in the predetermined wavelength range [maintains/promotes the biofunctions by] includes means for activating an autonomic nervous system.

32. (Amended) A radiant energy radiation apparatus according to claim 1, wherein the radiation means for providing radiation in a visible wavelength range and the radiation means for providing radiation in the predetermined wavelength range are integrated [together].

33. (Amended) A radiant energy radiation apparatus according to claim 1, wherein the radiation means for providing radiation in a visible wavelength range and the radiation means for providing radiation in the predetermined wavelength range are independently provided [from each other].

39. (Amended) A radiant energy radiation apparatus according to claim 1, wherein: the illumination light has a color of light which does not cause discomfort; and a deviation (duv) of the chromaticity of light from a Planckian locus in Commission Internationale de l'Eclairage (CIE) 1960 UCS chromaticity diagram is within ± 0.01.

40. (Amended) A radiant energy radiation apparatus according to claim 36, wherein the apparatus [has a configuration of] is a discharge lamp.

41. (Amended) A radiant energy radiation apparatus according to claim 37, wherein the apparatus [has a configuration of] is a discharge lamp.

42. (Amended) A radiant energy radiation apparatus according to claim [38] 1, wherein the apparatus [has a configuration of] is a discharge lamp.

43. (Amended) A radiant energy radiation apparatus according to claim 39, wherein the apparatus [has a configuration of] is a discharge lamp.

44. (Amended) A radiant energy radiation apparatus according to claim 40, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

45. (Amended) A radiant energy radiation apparatus according to claim 41, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

46. (Amended) A radiant energy radiation apparatus according to claim 42, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

47. (Amended) A radiant energy radiation apparatus according to claim 43, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

48. (Amended) A radiant energy radiation apparatus according to claim 36, wherein the apparatus [has a configuration of] is an incandescent lamp.

49. (Amended) A radiant energy radiation apparatus according to claim 37, wherein the apparatus [has a configuration of] is an incandescent lamp.

50. (Amended) A radiant energy radiation apparatus according to claim [38] 1, wherein the apparatus [has a configuration of] is an incandescent lamp.

51. (Amended) A radiant energy radiation apparatus according to claim 39, wherein the apparatus [has a configuration of] is an incandescent lamp.

52. (Amended) A radiant energy radiation apparatus according to claim 36, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

53. (Amended) A radiant energy radiation apparatus according to claim 37, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

54. (Amended) A radiant energy radiation apparatus according to claim [38] 1, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

55. (Amended) A radiant energy radiation apparatus according to claim 39, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

59. (Amended) A radiant energy radiation apparatus according to claim 56, wherein the apparatus [has a configuration of] is a discharge lamp.

60. (Amended) A radiant energy radiation apparatus according to claim 57, wherein the apparatus [has a configuration of] is a discharge lamp.

61. (Amended) A radiant energy radiation apparatus according to claim 58, wherein the apparatus [has a configuration of] is a discharge lamp.

62. (Amended) A radiant energy radiation apparatus according to claim 59, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

63. (Amended) A radiant energy radiation apparatus according to claim 60, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

64. (Amended) A radiant energy radiation apparatus according to claim 61, wherein the [apparatus has a configuration of] discharge lamp is a fluorescent discharge lamp.

65. (Amended) A radiant energy radiation apparatus according to claim 56, wherein the apparatus [has a configuration of] is an incandescent lamp.

66. (Amended) A radiant energy radiation apparatus according to claim 57, wherein the apparatus [has a configuration of] is an incandescent lamp.

67. (Amended) A radiant energy radiation apparatus according to claim 58, wherein the apparatus [has a configuration of] is an incandescent lamp.

68. (Amended) A radiant energy radiation apparatus according to claim 56, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

69. (Amended) A radiant energy radiation apparatus according to claim 57, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

70. (Amended) A radiant energy radiation apparatus according to claim 58, wherein the apparatus [has a configuration of] is a light source including a solid light emitting device.

72. (Amended) A radiant energy radiation apparatus according to claim 17, wherein [the apparatus has a display function of displaying a predetermined image] said means for providing radiation in a predetermined wavelength range of 600 nm to 1100 nm is provided in or around a display section of a display apparatus.

73. (Amended) A radiant energy radiation apparatus according to claim 72, wherein [the predetermined image is displayed by the means for radiating radiation in the predetermined wavelength range] said means for providing radiation in a predetermined wavelength range of 600 nm to 1100 nm provided in or around a display section of a display apparatus displays a predetermined image in the predetermined wavelength range.

Claims 2, 18, 34, 38 and 71 are cancelled.